

# Washington Health Benefit Exchange – Healthcare Provider Directory Business Rules

WA HBE Healthcare Provider Directory

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## 1. Sample healthcare provider directory template

The sample healthcare provider directory template lists the business rules, for possible and allowed values, for each field in the template.

Field	Entity	Type/Format	Possible/Allowed Value	Description
ProviderID	PROVIDER	ALPHANUMERIC(30)	Optional	Carrier's internal data ID number for reference, data integrity, not for consumer display. This field is used during maintenance to determine whether a provider was added, deleted or updated.
Facility Name	PROVIDER	ALPHANUMERIC(150)	Required for facilities. Null for individuals	Should be null for individuals/practitioners, and only populated for facilities.
Associated Clinic Name	PROVIDER	ALPHANUMERIC(150)	Optional for individuals. Null for facilities	Only populate for individuals/practitioners rows. Their office location might have another name, besides the person's name. <b><i>Don't use this field for hospital affiliations or Facility Name.</i></b>
Last Name	PROVIDER	ALPHANUMERIC(50)	Null for facilities, but required for individuals	Null except for individuals/practitioners
First Name	PROVIDER	ALPHANUMERIC(50)	Null for facilities, but required for individuals	Null except for individuals/practitioners
Middle Initial	PROVIDER	ALPHANUMERIC(25)	Optional	Null except for individuals/practitioners
Degree	PROVIDER	ALPHANUMERIC(25)	Null for facilities, but required for individuals	Examples: "MD", "DDS", "RN", Optional but desired

<b>Gender</b>	PROVIDER	"M", "F" or null for facilities	Optional	
<b>Office Street Address</b>	PROVIDER	ALPHANUMERIC(80)	Required	
<b>Office Suite</b>	PROVIDER	ALPHANUMERIC(80)	Optional	For map reading software, it's best to separate out suite #
<b>Office City</b>	PROVIDER	ALPHANUMERIC(30)	Required	
<b>Office State</b>	PROVIDER	ALPHANUMERIC(2)	Required	
<b>Office Zip</b>	PROVIDER	NUMBER	Required	
<b>Office Phone</b>	PROVIDER	ALPHANUMERIC(100)	(111) 111-1111 Required	Use "," to delimit up to 9 different phone numbers
<b>Office Fax</b>	PROVIDER	ALPHANUMERIC(100)	(111) 111-1111 Optional	Use "," to delimit up to 9 different phone numbers
<b>Office Email</b>	PROVIDER	ALPHANUMERIC(50)		
<b>Is PCP?</b>	PROVIDER	ALPHANUMERIC	Optional "Y", "N", or null	Is this a Primary Care Provider?
<b>Accept New Patients?</b>	PROVIDER		Optional "Y", "N", or null	Suggest populate "Y" if the provider accept new patients under any circumstance, otherwise the carrier's plans will be excluded from some

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				searches.
<b>PCP #</b>	PROVIDER	ALPHANUMERIC(50)	Optional	Optional but desired, if carrier prefers consumers use code numbers to identify providers
<b>NPI</b>	PROVIDER	ALPHANUMERIC	Optional	Carrier's discretion whether to use individual or location NPI numbers.
<b>Provider Type</b>	PROVIDER	ALPHANUMERIC(200)	Required if there is no other way to identify hospitals	Use ";" to delimit up to 5 provider types. The values for this field vary from carrier to carrier. What is key and required is that Hospitals be identified. No standard values, but examples are: Physician, PCP, Specialist, Hospital, Clinic, Lab, Pharmacy, Skilled Nursing Facility, Hospice, DME
<b>Primary Specialty</b>	PROVIDER	ALPHANUMERIC(200)	Required for individuals, optional for facilities	Use ";" to delimit up to 5 primary specialties. Please give description rather than code.
<b>Primary Specialty Board Certification</b>	PROVIDER	ALPHANUMERIC	<p>"CERT", "ELIG", "NAPP", "NCRT", or null</p> <p>Optional</p>	<p>"CERT" = Board certified</p> <p>"ELIG" = Eligible or trained for certification</p> <p>"NAPP" = Board certification not applicable (for some specialties)</p> <p>"NCRT" = Not board certified</p> <p>"GRDF" = Grandfathered</p> <p>"UDSV" = Underserved</p> <p>Use ";" to delimit up to 5 provider primary specialty codes. 1<sup>st</sup> code should correspond to 1<sup>st</sup> primary specialty, etc... Leave as null if unknown</p>

<b>Secondary Specialty</b>	PROVIDER	ALPHANUMERIC(200)	Optional	Use ";" to delimit up to 5 secondary specialties. Please give description rather than code.
<b>Secondary Specialty Board Certification</b>	PROVIDER		"CERT", "ELIG", "NAPP", "NCRT", or null  Optional	"CERT" = Board certified "ELIG" = Eligible or trained for certification "NAPP" = Board certification not applicable (for some specialties) "NCRT" = Not board certified "GRDF" = Grandfathered "UDSV" = Underserved  Use ";" to delimit up to 5 secondary specialty certification codes. 1 <sup>st</sup> code should correspond to 1 <sup>st</sup> secondary specialty, etc... Leave as null if unknown
<b>Hospital Accreditations</b>	PROVIDER	ALPHANUMERIC(150)	char per accreditation, like an affiliation  Optional, but null for non-Hospital rows	Hospital accreditations as defined by NCQA RR5. Recommend the acronym, i.e. "CARF", not "Commission on Accreditation of Rehabilitation Facilities". Use ";" to delimit up to 5 accreditations
<b>Medical School</b>	PROVIDER	VARCHAR(200)	Optional	Including "Medical school Internship" and "Medical School Resident" fields.
<b>Medical School Internship</b>	PROVIDER		Optional	
<b>Medical School</b>	PROVIDER		Optional	

<b>Resident</b>				
<b>Secondary Language</b>	PROVIDER	ALPHANUMERIC(40)	Optional	Use ";" to delimit up to 10 secondary languages.
<b>Hospital Affiliation</b>	PROVIDER	ALPHANUMERIC(150)	Optional	Hospital affiliations as defined by NCQA RR5. Use ";" to separate up to 10 hospital affiliations
<b>Medical Group Affiliation</b>	PROVIDER	ALPHANUMERIC(150)	Optional  Including "Associated Clinic Name" field	Medical Groups as defined by NCQA RR5.  Use ";" to separate up to 10 professional medical group affiliations
<b>Provider Specific Disclaimers</b>	PROVIDER	ALPHANUMERIC(1000)	Optional	Provider specific restrictions or disclaimers. Examples: "PCP must authorize for in-network rates", "This provider is only available to residents of Cook county". "In office surgery not available at this location"
<b>Network</b>	PROVIDER	ALPHANUMERIC(50)	Required	Commercial name of network. Distinguishes between different HMO, PPO, or a premier/saver network. If same provider is in multiple networks, please repeat the row. Same provider, different network means 2 provider rows differing only by Network.



## 2. Standardization and Normalization

### Step 1 –Healthcare provider data set received from issuers

To better illustrate the steps, the following table only shows one unit, of healthcare provider plus location.

Issuer	First	Middle	Last	Gender	Title	Education	Street	Suite	Specialty, Services	Languages
A	Beth Anne		Freire		M.D.	Georgetown	Wachusett Pediatrics	2 Narrows Road Building C Ste 305	Neurology	Mandarin
B	Beth	A.	Freire	Female	MEDICAL DOCTOR	George Washington Univ Sch Of Med Dc	C/O Neurology Associates, #305, 2 S Narrows Rd,		Neurodevelopmental Disabilities	Filipino
C	ELIZABETH	ANNE	FREIRE	FEMALE			2 SOUTH NARROWS RD., FLOOR 3	BLDG C	NEUROLOGY W/ SPS QUAL IN CHILD NEUROLOGY	
D	bethanne		freire				2 narrow, unit 305		Pediatrics, Child Neurology	
E	Beth	A	Freire	F	MD	Georgetown University School of Medicine	2 South Narrows Road Building C	Suite 305	Neurology With Special Qualification in Child Neurology	Cambodian, Filipino

## Step 2 – Standardization of healthcare provider directory data

- Capitalization is standardized.
- Gender is standardized.
- Title is standardized using business rules plus a proprietary list of matching titles: M.D. = MEDICAL DOCTOR = MD
- Street Address is separated from other address information using proprietary algorithms.
- Each street address is compared to the Google Maps database of addresses, and then rewritten in Google Maps standard address format. This comparison step also checks whether the address is valid.

Issuers must provide accurate service locations. Billing addresses not recognized by Google’s geographic database, will be filtered and discarded. Discarded addresses are always less than 0.1% of an issuer’s total networks, assuming only service locations were provided. These discarded addresses are unrecognizable by the geographic database. Reasons for failed addresses could be data entry errors from healthcare providers and issuers, or geographic databases are not yet in sync with new municipality addresses. It is preferred that issuers do not submit ancillary data. But if submitted, eHealth will filter or discard such data.

- Healthcare provider directory data from issuers should only contain practitioners and hospitals. Since all issuers do not have accurate consistent records for ancillary facilities such as SNF, Hospices, Dialysis Centers, Clinics, etc., fair comparisons cannot be made.
- “Hospitals” are considered general acute care facilities, or specialized acute care such as children or geriatric hospitals. Although many kinds of psychiatric and rehabilitation facilities are called “hospitals”, only records for facilities that provide in-patient and acute care should be provided. Psychiatric and rehabilitation facilities that provide only out-patient, or only long term care should not be submitted as hospital records.

Issuer	First	Middle	Last	Gender	Title	Education	Street	Suite	Specialty, Services	Languages
A	Beth Anne		Freire		MD	Georgetown	2 S Narrows Rd	Suite 305	Neurology	Mandarin
B	Beth	A.	Freire	F	MD	George Washington Univ Sch Of Med Dc	2 S Narrows Rd	Suite 305	Neurodevelopmental Disabilities	Filipino
C	Elizabeth	Anne	Freire	F			2 S Narrows Rd	Building C, Suite 305	Neurology W/ Spc Qual In Child Neurology	
D	Bethanne		Freire				2 S Narrows Rd	Suite 305	Pediatrics, Child Neurology	

E	Beth	A	Freire	F	MD	Georgetown University School of Medicine	2 S Narrows Rd	Building C, Suite 305	Neurology With Special Qualification in Child Neurology	Cambodian, Filipino
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### Step 3 – Matching Healthcare providers

- Key matching points are First and Last names, plus geo (geographical) coordinates- latitude plus longitude. Geolocation accuracy represents Google Maps confidence level that the correct address was found. The solution also uses geolocation accuracy as a quality measurement for that address.
- First names are matched through a proprietary list of diminutive names.  
e.g. Elizabeth = Beth = Bethanne = Beth Anne = Bethany...
- A match is made when all key fields match, and checkpoints are confirmed. Although middle initial is a checkpoint field, it does not stop a match in the case where the middle initial is missing.
- For last name, the proprietary matching rules are stricter, but there is leeway. e.g. A last name of “Smith-Barnes” would match “Smith Barns” etc.

Issuer	First	Middle	Last	Gender	Title	Education	Geo Coordinates	Specialty, Services	Languages
A	Beth Anne		Freire		MD	Georgetown	Latitude: 42.168907, Longitude: -72.344926, Geolocation Accuracy: 9	Neurology	Mandarin
B	Beth	A.	Freire	F	MD	George Washington Univ Sch Of Med Dc	Latitude: 42.168907, Longitude: -72.344926, Geolocation Accuracy: 9	Neurodevelopmental Disabilities	Filipino
C	Elizabeth	Anne	Freire	F			Latitude: 42.168907, Longitude: -72.344926, Geolocation Accuracy: 9	Neurology W/ Spc Qual In Child Neurology	
D	Bethanne		Freire				Latitude: 42.168907, Longitude: -72.344926, Geolocation Accuracy: 7	Pediatrics, Child Neurology	
E	Beth	A	Freire	F	MD	Georgetown University School of Medicine	Latitude: 42.168907, Longitude: -72.344926, Geolocation Accuracy: 9	Neurology With Special Qualification in Child Neurology	Cambodian, Filipino

MATCH

MATCH

MATCH

## Step 4 – Normalization – Collapsing into One Healthcare provider

Per address, a healthcare provider can have only one name. Presenting different names would be too confusing. So, one name, one title, one gender must be chosen, for all issuers. Overwriting various issuer data into one healthcare provider is called normalization.

Normalization's first step is to determine the source of which name to display. Proprietary algorithms are used to normalize, and collapse multiple records of a healthcare provider, into one record.

Issuer	First	Middle	Last	Gender	Title	Education	Street	Suite	Specialty, Services	Languages
E	Beth	A	Freire	F	MD	Georgetown University School of Medicine	2 S Narrows Rd	Building C, Suite 305	Neurology With Special Qualification in Child Neurology	Cambodian, Filipino
A	Beth Anne		Freire		MD	Georgetown	2 S Narrows Rd	Suite 305	Neurology	Mandarin
B	Beth	A.	Freire	F	MD	George Washington Univ Sch Of Med Dc	2 S Narrows Rd	Suite 305	Neurodevelopmental Disabilities	Filipino
C	Elizabeth	Anne	Freire	F			2 S Narrows Rd	Building C, Suite 305	Neurology W/ Spc Qual In Child Neurology	
D	Bethanne		Freire				2 S Narrows Rd	Suite 305	Pediatrics, Child Neurology	

## Step 5 – Normalization – Final Results

Fields such as name, addresses, gender, education, and title are treated as one field. Other fields such as Specialty, “is PCP?”, and “Accepts New Patients” remain issuer-specific. “Secondary languages” and “Specialty, Services” have the option of being treated issuer-specific.

Issuer	First	Middle	Last	Gender	Title	Education	Street	Suite	Specialty, Services	Languages
E	Beth	A	Freire	F	MD	Georgetown University School of Medicine	2 S Narrows Rd	Building C, Suite 305	Neurology With Special Qualification in Child Neurology	Cambodian, Filipino, Mandarin
A									Neurology	Cambodian, Filipino, Mandarin
B									Neurodevelopmental Disabilities	Cambodian, Filipino, Mandarin
C									Neurology W/ Spc Qual In Child Neurology	Cambodian, Filipino, Mandarin
D									Pediatrics, Child Neurology	Cambodian, Filipino, Mandarin

“Secondary languages” and “Specialty, Services” have the option of being treated as one field as in the table below.

Issuer	First	Middle	Last	Gender	Title	Education	Street	Suite	Specialty, Services	Languages
E	Beth	A	Freire	F	MD	Georgetown University School of Medicine	2 S Narrows Rd	Building C, Suite 305	Neurology With Special Qualification in Child Neurology Neurology Neurodevelopmental Disabilities Neurology W/ Spc Qual In Child Neurology	Cambodian, Filipino, Mandarin

									Pediatrics, Child Neurology	
A										
B										
C										
D										